What is claimed is:

1. An image processing apparatus for decoding a compressed image data, the image data being divided to a plurality of tiles, each of which is a basic unit of process in encoding or decoding process, the image processing apparatus comprising:

a detector which detects an existence status of ROI set within said compressed image data;

a determiner which determines whether each tile is a ROI tile composed of only ROI, a non-ROI tile composed of only non-ROI, or a ROI boundary tile composed of ROI and non-ROI based on said existence status of ROI detected by said detector;

a processor which shifts only frequency transform coefficient of said ROI set within each tile to lower bit side for said ROI tile and said non-ROI tile determined by said determiner, and which shifts frequency transform coefficients of both ROI and non-ROI set within each tile to lower bit side for said ROI boundary tile determined by said determiner.

2. The image processing apparatus according to claim 1, wherein said detector detects the existence status of ROI set based on a frequency transform coefficient of said tile for every tile.

3. The image processing apparatus according to claim 1,

wherein said processor shifts a frequency transform coefficient corresponding to non-ROI to lower bit side for a tile which abuts with said ROI boundary tile among said non-ROI tiles determined by said determiner.

4. An image processing apparatus for decoding a compressed image data, the image data being divided to a plurality of tiles, each of which is as a basic unit of process in encoding or decoding process, the image processing apparatus comprising:

a detector which detects an existence status of ROI set within said compressed image data;

a determiner which determines whether each tile is a ROI tile composed of only ROI, a non-ROI tile composed of only non-ROI, or a ROI boundary tile composed of ROI and non-ROI based on said existence status of ROI detected by said detector;

a processor which performs a specific process for frequency transform coefficients of ROI and non-ROI within each tile for luminance component and color difference component of each tile determined by said determiner.

5. The image processing apparatus according to claim 4, wherein said detector detects the existence status of ROI set based on a frequency transform coefficient of said tile for every tile.

6. The image processing apparatus according to claim 4,

wherein said processor shifts only frequency transform coefficients corresponding to ROI to lower bit side for luminance component and color difference component of ROI tile determined by said determiner, shift frequency transform coefficients corresponding to non-ROI to lower bit side for color difference component determined by said determiner and shift frequency transform coefficients corresponding to ROI to lower bit side for luminance component of ROI boundary tile determined by said determiner while shifting frequency transform coefficients corresponding to both ROI and non-ROI to lower bit side for color difference component of ROI boundary tile.

7. An image processing apparatus for decoding a compressed image data, the image data being divided to a plurality of tiles, each of which is a basic unit of process in encoding or decoding process, the image processing apparatus comprising:

a detector which detects an existence status of ROI set within said compressed image data;

a determiner which determines whether each tile is a ROI tile composed of only ROI, a non-ROI tile composed of only non-ROI, or a ROI boundary tile composed of ROI and non-ROI based on said existence status of ROI detected by said detector;

a processor which performs a first process for said

ROI tile and said non-ROI tile determined by said determiner, and which performs a second process for said ROI boundary tile determined by said determiner.

8. The image processing apparatus according to claim 7, wherein said first process is shifting only frequency transform coefficient of said ROI set within each tile to lower bit side for said ROI tile and said non-ROI tile determined by said determiner, and said second process is shifting frequency transform coefficients of both ROI and non-ROI set within each tile to lower bit side for said ROI boundary tile determined by said determiner.

9. The image processing apparatus according to claim 7, wherein said first process is shifting only frequency transform coefficient of said ROI to lower bit side for luminance component and color difference component of said ROI tile determined by said determiner and shifting frequency transform coefficient of said non-ROI to lower bit side for color difference component of said non-ROI tile determined by said determiner, and

said second process is shifting only frequency transform coefficient of said ROI to lower bit side for luminance component of said ROI boundary tile determined by said determiner and shifting frequency transform coefficients of both ROI and non-ROI to lower bit side for color difference component of said ROI boundary tile.

10. A method of processing image for decoding a compressed image data, the image data being divided to a plurality of tiles, each of which is a basic unit of process in encoding or decoding process, the method comprising steps of:

detecting an existence status of ROI set within said compressed image data;

determining whether each tile is a ROI tile composed of only ROI, a non-ROI tile composed of only non-ROI, or a ROI boundary tile composed of ROI and non-ROI based on said existence status of ROI detected by said detector;

performing a first process for said ROI tile and said non-ROI tile determined by said determiner, and which performs a second process for said ROI boundary tile determined by said determiner.